

SEQUENCE LISTING

<110> CHEN, Hong

<120> HUMAN GLUCOSE-6-PHOSPHATASE MOLECULES AND USES THEREOF

<130> 10147-33U1

<140> Not Yet Assigned

<141> 2001-06-01

<150> US 09/586,511

<151> 2000-06-02

<160> 27

<170> PatentIn Ver. 2.1

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<211> 1138

<212> DNA

<213> Homo sapiens

<400> 1

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<212> PRT

<213> Homo sapiens

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Gly Asp Pro Arg Asn Ile Phe Phe Ile Tyr Phe Pro Leu Cys Phe Gln
      35             40             45

Phe Asn Gln Thr Val Gly Thr Lys Met Ile Trp Val Ala Val Ile Gly
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Asp Trp Leu Asn Leu Ile Phe Lys Trp Ile Leu Phe Gly His Arg Pro
      65             70             75             80

Tyr Trp Trp Val Gln Glu Thr Gln Ile Tyr Pro Asn His Ser Ser Pro
      85             90             95

Cys Leu Glu Gln Phe Pro Thr Thr Cys Glu Thr Gly Pro Gly Ser Pro
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Gln Ile Ser Val Cys Ile Ser Arg Val Phe Ile Ala Thr His Phe Pro		
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His Gln Val Ile Leu Gly Val Ile Gly Gly Met Leu Val Ala Glu Ala		
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Phe Glu His Thr Pro Gly Ile Gln Thr Ala Ser Leu Gly Thr Tyr Leu		
195	200	205
Lys Thr Asn Leu Phe Leu Phe Leu Phe Ala Val Gly Phe Tyr Leu Leu		
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Lys Trp Cys Ala Asn Pro Asp Trp Ile His Ile Asp Thr Thr Pro Phe		
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290	295	300
Gln Leu Tyr His Phe Leu Gln Ile Pro Thr His Glu Glu His Leu Phe		
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<213> Mus musculus

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35 40 45

Leu Asn Gln Asn Val Gly Thr Lys Met Ile Trp Val Ala Val Ile Gly
50 55 60

Asp Trp Phe Asn Leu Ile Phe Lys Trp Ile Leu Phe Gly His Arg Pro
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Tyr Trp Trp Ile Gln Glu Thr Glu Ile Tyr Pro Asn His Ser Ser Pro
85 90 95

Cys Leu Glu Gln Phe Pro Thr Thr Cys Glu Thr Gly Pro Gly Ser Pro
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Ser Gly His Ala Met Gly Ser Ser Cys Val Trp Tyr Val Met Val Thr
115 120 125

Ala Ala Leu Ser Tyr Thr Ile Ser Arg Met Glu Glu Ser Ser Val Thr
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Leu His Arg Leu Thr Trp Ser Phe Leu Trp Ser Val Phe Trp Leu Ile
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Gln Ile Ser Val Cys Ile Ser Arg Val Phe Ile Ala Thr His Phe Pro
165 170 175

His Gln Val Ile Leu Gly Val Ile Gly Gly Met Leu Val Ala Glu Ala
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Phe Glu His Thr Pro Gly Val His Met Ala Ser Leu Ser Val Tyr Leu
195 200 205

Lys Thr Asn Val Phe Leu Phe Leu Phe Ala Leu Gly Phe Tyr Leu Leu
 210 215 220
 Leu Arg Leu Phe Gly Ile Asp Leu Leu Trp Ser Val Pro Ile Ala Lys
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 Lys Trp Cys Ala Asn Pro Asp Trp Ile His Ile Asp Ser Thr Pro Phe
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			20					25					30		
Gly	Asp	Pro	Arg	Asn	Ile	Phe	Ser	Ile	Tyr	Phe	Pro	Leu	Trp	Phe	Gln
		35				40						45			
Leu	Asn	Gln	Asn	Val	Gly	Thr	Lys	Met	Ile	Trp	Val	Ala	Val	Ile	Gly
	50				55					60					
Asp	Trp	Phe	Asn	Leu	Ile	Phe	Lys	Trp	Ile	Leu	Phe	Gly	His	Arg	Pro
65				70					75					80	
Tyr	Trp	Trp	Ile	Gln	Glu	Thr	Glu	Ile	Tyr	Pro	Asn	His	Ser	Ser	Pro
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Cys	Leu	Glu	Gln	Phe	Pro	Thr	Thr	Cys	Glu	Thr	Gly	Pro	Gly	Ser	Pro
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Ser	Gly	His	Ala	Met	Gly	Ser	Ser	Cys	Val	Trp	Tyr	Val	Met	Val	Thr
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Ala	Ala	Leu	Ser	Tyr	Thr	Ile	Ser	Arg	Met	Glu	Glu	Ser	Ser	Val	Thr
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Leu	His	Arg	Leu	Thr	Trp	Ser	Phe	Leu	Trp	Ser	Val	Phe	Trp	Leu	Ile
145				150					155					160	

Gln Ile Ser Val Cys Ile Ser Arg Val Phe Ile Ala Thr His Phe Pro
165 170 175

His Gln Val Ile Leu Gly Val Ile Gly Gly Met Leu Val Ala Glu Ala
180 185 190

Phe Glu His Thr Pro Gly Val His Met Ala Ser Leu Ser Val Tyr Leu
195 200 205

Lys Thr Asn Val Phe Leu Phe Leu Phe Ala Leu Gly Phe Tyr Leu Leu
210 215 220

Leu Arg Leu Phe Gly Ile Asp Leu Leu Trp Ser Val Pro Ile Ala Lys
225 230 235 240

Lys Trp Cys Ala Asn Pro Asp Trp Ile His Ile Asp Ser Thr Pro Phe
245 250 255

Ala Gly Leu Val Arg Asn Leu Gly Val Leu Phe Gly Leu Gly Phe Ala
260 265 270

Ile Asn Ser Glu Met Phe Leu Arg Ser Cys Gln Gly Glu Asn Gly Thr
275 280 285

Lys Pro Ser Phe Arg Leu Leu Cys Ala Leu Thr Ser Leu Thr Thr Met
290 295 300

Gln Leu Tyr Arg Phe Ile Lys Ile Pro Thr His Ala Glu Pro Leu Phe
305 310 315 320

Tyr Leu Leu Ser Phe Cys Lys Ser Ala Ser Ile Pro Leu Met Val Val
325 330 335

Ala Leu Ile Pro Tyr Cys Val His Met Leu Met Arg Pro Gly Asp Lys
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Lys Thr Lys
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<210> 24

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<212> PRT

<213> Haplochromis nubilis

<400> 24

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 20 25 30

Ala Asp Leu His Thr Thr Phe Phe Trp Leu Phe Pro Ile Trp Phe His
 35 40 45

Leu Arg Arg Asp Thr Ala Leu Arg Leu Ile Trp Val Ala Val Ile Gly
 50 55 60

Asp Trp Leu Asn Leu Val Leu Lys Trp Val Leu Phe Gly Glu Arg Pro
 65 70 75 80

Tyr Trp Trp Val His Glu Thr Lys Phe Tyr Gly Ala Gly Pro Ala Pro
 85 90 95

Ser Leu Gln Gln Phe Pro Ile Thr Cys Glu Thr Gly Pro Gly Ser Pro
 100 105 110

Ser Gly His Ala Met Gly Ala Ala Gly Val Trp Tyr Val Met Val Thr
 115 120 125

Ala Leu Leu Ser Ile Ala Arg Glu Lys Gln Cys Pro Pro Leu Leu Tyr
 130 135 140

Arg Phe Leu Tyr Ile Gly Leu Trp Met Leu Met Gly Leu Val Glu Leu
 145 150 155 160

Val Val Cys Ile Ser Arg Val Tyr Met Ala Ala His Phe Pro His Gln
 165 170 175

Val Ile Ala Gly Ile Ile Thr Gly Thr Leu Val Ala Glu Val Val Ser
 180 185 190

Lys Glu Lys Trp Ile Tyr Ser Ala Ser Leu Lys Lys Tyr Phe Leu Ile
 195 200 205

Thr Leu Phe Leu Thr Ser Phe Ala Val Gly Phe Tyr Val Leu Leu Lys
 210 215 220

Ala Leu Asp Val Asp Leu Leu Trp Thr Met Glu Lys Ala Gln Lys Trp
 225 230 235 240

Cys Ile Arg Pro Glu Trp Val His Leu Asp Ser Ala Pro Phe Ala Ser
 245 250 255

Leu Leu Arg Asn Met Gly Ser Leu Phe Gly Leu Gly Leu Gly Leu His
 260 265 270

Ser Pro Phe Tyr Lys Thr Thr Lys Met Arg Ile Met Ser Ala Pro Leu
 275 280 285

Arg Ile Gly Cys Ile Val Ile Ser Val Ser Leu Leu His Leu Leu Asp
 290 295 300

Gly Trp Thr Phe Ser Pro Glu Asn His Met Thr Phe Tyr Ala Leu Ser
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Phe Gly Lys Ser Ala Val Ala Leu Leu Ile Pro Thr Thr Leu Val Pro
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Trp Ala Leu Ser Lys Ile Tyr Pro Val Lys Thr Glu Gly Lys Asn Leu
 340 345 350

<210> 25

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<212> PRT

<213> Mus sp.

<400> 25

Met Glu Glu Gly Met Asn Ile Leu His Asp Phe Gly Ile Gln Ser Thr
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Arg Tyr Leu Gln Val Asn Tyr Gln Asp Ser Gln Asp Trp Phe Ile Leu
 20 25 30

Val Ser Val Ile Ala Asp Leu Arg Asn Ala Phe Tyr Val Leu Phe Pro
 35 40 45

Ile Trp Phe His Leu Lys Glu Thr Val Gly Ile Asn Leu Leu Trp Val
 50 55 60

Ala Val Val Gly Asp Trp Phe Asn Leu Val Phe Lys Trp Ile Leu Phe
 65 70 75 80

Gly Gln Arg Pro Tyr Trp Trp Val Leu Asp Thr Asp Tyr Tyr Ser Asn
 85 90 95

Ser Ser Val Pro Ile Ile Lys Gln Phe Pro Val Thr Cys Glu Thr Gly
 100 105 110

Pro Gly Ser Pro Ser Gly His Ala Met Gly Ala Ala Gly Val Tyr Tyr

115		120		125	
Val Met Val Thr Ser Thr	Leu Ala Ile Phe Arg Gly Lys Lys Lys Pro				
130	135	140			
Thr Tyr Gly Phe Arg Cys Leu Asn Val Ile Leu Trp Leu Gly Phe Trp					
145	150	155	160		
Ala Val Gln Leu Asn Val Cys Leu Ser Arg Ile Tyr Leu Ala Ala His					
	165	170	175		
Phe Pro His Gln Val Val Ala Gly Val Leu Ser Gly Ile Ala Val Ala					
	180	185	190		
Glu Thr Phe Ser His Ile Arg Gly Ile Tyr Asn Ala Ser Leu Arg Lys					
195	200	205			
Tyr Cys Leu Ile Thr Ile Phe Leu Phe Gly Phe Ala Leu Gly Phe Tyr					
210	215	220			
Leu Leu Leu Lys Gly Leu Gly Val Asp Leu Leu Trp Thr Leu Glu Lys					
225	230	235	240		
Ala Lys Arg Trp Cys Glu Arg Pro Glu Trp Val His Leu Asp Thr Thr					
	245	250	255		
Pro Phe Ala Ser Leu Phe Lys Asn Leu Gly Thr Leu Leu Gly Leu Gly					
	260	265	270		
Leu Ala Leu Asn Ser Ser Met Tyr Arg Lys Ser Cys Lys Gly Glu Leu					
275	280	285			
Ser Lys Ser Phe Pro Phe Arg Phe Ala Cys Ile Val Ala Ser Leu Val					
290	295	300			
Leu Leu His Leu Phe Asp Ser Leu Lys Pro Pro Ser Gln Val Glu Leu					
305	310	315	320		
Ile Phe Tyr Ile Leu Ser Phe Cys Lys Ser Ala Thr Val Pro Phe Ala					
	325	330	335		
Ser Val Ser Leu Ile Pro Tyr Cys Leu Ala Arg Ile Leu Gly Gln Thr					
	340	345	350		
His Lys Lys Ser Leu					
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<210> 26

<211> 357

<212> PRT

<213> Canis familiaris

<400> 26

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Val Ser Val Ile Ala Asp Leu Arg Asn Ala Phe Tyr Val Leu Phe Pro
35 40 45

Ile Trp Phe His Leu Arg Glu Ala Val Gly Ile Lys Leu Leu Trp Val
50 55 60

Ala Val Ile Gly Asp Trp Leu Asn Leu Val Phe Lys Trp Ile Leu Phe
65 70 75 80

Gly Gln Arg Pro Tyr Trp Trp Val Met Asp Thr Asp Tyr Tyr Ser Asn
85 90 95

Thr Ser Val Pro Leu Ile Lys Gln Phe Pro Val Thr Cys Glu Thr Gly
100 105 110

Pro Gly Ser Pro Ser Gly His Ala Met Gly Thr Ala Gly Val Tyr Tyr
115 120 125

Val Met Val Thr Ser Thr Leu Ser Ile Phe Arg Gly Arg Lys Arg Pro
130 135 140

Thr Tyr Arg Phe Arg Cys Leu Asn Ile Leu Leu Trp Leu Gly Phe Trp
145 150 155 160

Ala Val Gln Leu Asn Val Cys Leu Ser Arg Ile Tyr Leu Ala Ala His
165 170 175

Phe Pro His Gln Val Val Ala Gly Val Leu Ser Gly Ile Ala Val Ala
180 185 190

Glu Thr Phe Arg His Ile Gln Ser Ile Tyr Asn Ala Ser Leu Lys Lys
195 200 205

Tyr Phe Leu Ile Thr Phe Phe Leu Phe Ser Phe Ala Ile Gly Phe Tyr
210 215 220

Leu Leu Leu Lys Gly Leu Gly Val Asp Leu Leu Trp Thr Leu Glu Lys
 225 230 235 240
 Ala Arg Arg Trp Cys Glu Arg Pro Glu Trp Val His Ile Asp Thr Thr
 245 250 255
 Pro Phe Ala Ser Leu Leu Lys Asn Val Gly Thr Leu Phe Gly Leu Gly
 260 265 270
 Val Thr Leu Asn Ser Ser Met Tyr Arg Glu Ser Cys Lys Gly Lys Leu
 275 280 285
 Ser Lys Trp Phe Pro Phe Arg Leu Ser Cys Ile Val Val Ser Leu Ile
 290 295 300
 Leu Leu His Leu Phe Asp Ser Leu Lys Pro Pro Ser Gln Thr Glu Leu
 305 310 315 320
 Ile Phe Tyr Thr Leu Ser Phe Cys Lys Ser Ala Ala Val Pro Leu Ala
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 340 345 350
 Asp Lys Lys Ser Leu
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<210> 27
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 <212> PRT
 <213> Homo sapiens

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 Val Ser Val Ile Ala Asp Leu Arg Asn Ala Phe Tyr Val Leu Phe Pro
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 Ile Trp Phe His Leu Gln Glu Ala Val Gly Ile Lys Leu Leu Trp Val
 50 55 60
 Ala Val Ile Gly Asp Trp Leu Asn Leu Val Phe Lys Trp Ile Leu Phe
 65 70 75 80

Gly	Gln	Arg	Pro	Tyr	Trp	Trp	Val	Leu	Asp	Thr	Asp	Tyr	Tyr	Ser	Asn	
				85					90						95	
Thr	Ser	Val	Pro	Leu	Ile	Lys	Gln	Phe	Pro	Val	Thr	Cys	Glu	Thr	Gly	
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Ala	Gln	Arg	Trp	Cys	Glu	Gln	Pro	Glu	Trp	Val	His	Ile	Asp	Thr	Thr	
				245					250					255		
Pro	Phe	Ala	Ser	Leu	Leu	Lys	Asn	Leu	Gly	Thr	Leu	Phe	Gly	Leu	Gly	
			260					265					270			
Leu	Ala	Leu	Asn	Ser	Ser	Met	Tyr	Arg	Glu	Ser	Cys	Lys	Gly	Lys	Leu	
		275					280					285				
Ser	Lys	Trp	Leu	Pro	Phe	Arg	Leu	Ser	Ser	Ile	Val	Ala	Ser	Leu	Val	
	290					295					300					
Leu	Leu	His	Val	Phe	Asp	Ser	Leu	Lys	Pro	Pro	Ser	Gln	Val	Glu	Leu	
305					310				315						320	
Val	Phe	Tyr	Val	Leu	Ser	Phe	Cys	Lys	Ser	Ala	Val	Val	Pro	Leu	Ala	
				325					330					335		

Ser Val Ser Val Ile Pro Tyr Cys Leu Ala Gln Val Leu Gly Gln Pro
340 345 350

His Lys Lys Ser Leu
355